

INCH-POUND

MIL-PRF-27/322D
19 May 2003
SUPERSEDING
MIL-PRF-27/322C
19 January 1989

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 300 VOLT-AMPERES, 60 HERTZ

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the transformer described herein shall consist of this document and the latest issue of specification MIL-PRF-27.

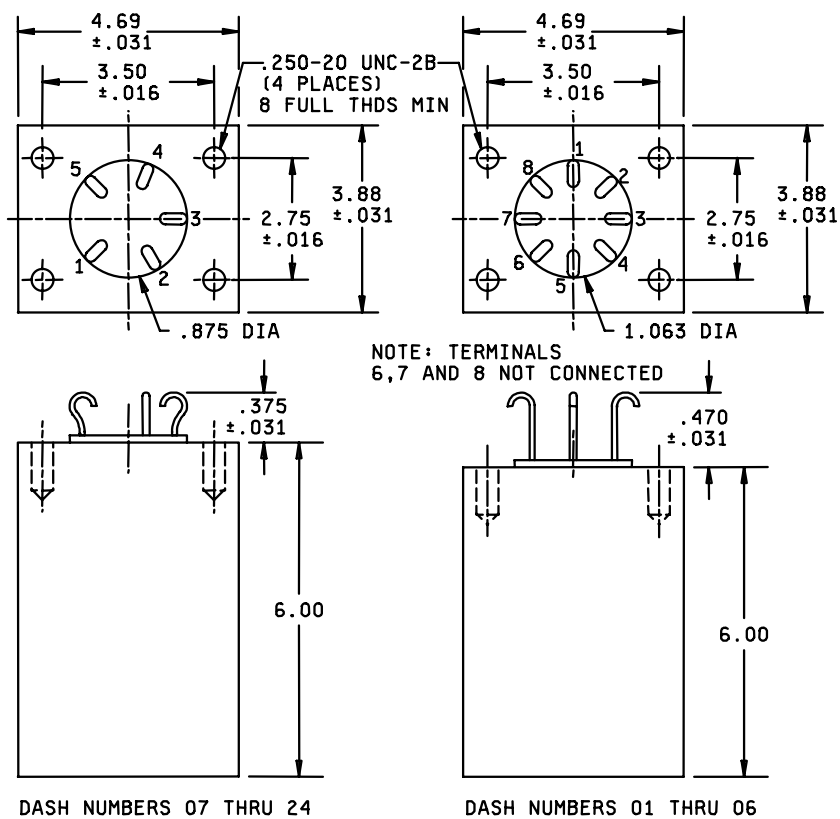
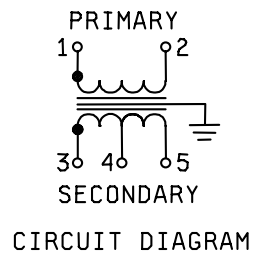
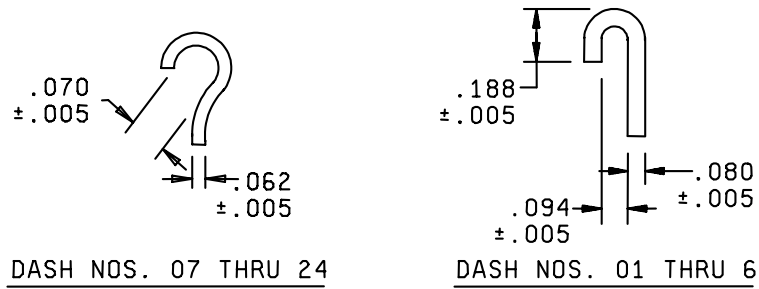


FIGURE 1. Dimensions and configurations.

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Inches	mm	Inches	mm
.005	0.13	.375	9.52
.016	0.41	.470	11.94
.031	0.79	.875	22.22
.062	1.57	1.063	27.00
.070	1.78	2.75	69.8
.080	2.03	3.50	88.9
.094	2.39	3.88	98.6
.188	4.78	4.69	119.1
.250	6.35	6.00	152.4

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the sides of the case.
4. Unless otherwise specified, tolerance shall be $\pm.063$ (1.60 mm).
5. Electrical values shall be marked as specified in table I.

FIGURE 1. Dimensions and configurations - Continued.

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REQUIREMENTS: (When numbers in parentheses, i.e., (1-2) are used, they indicate the winding and the extreme terminals of the winding.)

Electrical ratings:

Primary voltage (1-2): 115 volts ac, 50 to 60 hertz.

Primary dc resistance: 0.5 ohms ± 25 percent.

Secondary voltage (3-5): See table I.

Volt-ampere rating: 300 volt-amperes.

Working voltage (1-2): 535 volts peak.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle. Continuous.

Case: Metal enclosed.

Material: Steel.

Terminals: Solderable terminals.

<u>Dash numbers</u>	<u>Terminal type</u>	<u>Height (inches)</u>	<u>Diameter (inches)</u>
01 through 06	hook	0.470 \pm .031	0.080 \pm .005
07 through 24	hook	0.375 \pm .031	0.062 \pm .005

Weight: 17 pounds, maximum.

Operating temperature range. -55° to $+130^{\circ}\text{C}$.

Altitude: 10,000 feet.

Terminal strength: Method 211, MIL-STD-202, test condition A, 2.0 pounds.

Dielectric withstanding voltage (each winding) (at sea level): 1,500 volts rms.

Electrical characteristics:

Rated load: With 115 volts ac and 60 Hz across (1-2), and rated current in secondary, the voltage across (3-5) shall be as specified in table I.

Regulation:
$$\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100$$

Shall not exceed 10 percent.

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Polarity: Additive with terminals 2 and 3 connected.

Temperature rise: +35°C with 115 volts ac, 60 hertz across (1-2) at an ambient temperature of 95°C, full load terminals (3-5).

Marking location: See figure 1.

Shock (specified pulse): Method 213, MIL-STD-202, test condition G.

Part number: M27/322-(dash number from table I).

TABLE I. Electrical ratings.

Dash number	Secondary (3-5)		
	Voltage (volts) ±3 percent	Current ^{1/} (amperes)	DC resistance (ohms) ±25 percent
01	16.0	18.70	0.016
02	18.0	16.70	0.020
03	20.0	15.00	0.023
04	22.0	13.60	0.031
05	25.0	12.00	0.042
06	28.0	10.70	0.046
07	31.0	9.67	0.054
08	35.0	8.59	0.072
09	39.0	7.69	0.080
10	43.0	6.95	0.108
11	48.0	6.26	0.165
12	55.0	5.46	0.175
13	63.0	4.76	0.187
14	70.0	4.29	0.26
15	80.0	3.75	0.30
16	90.0	3.320	0.43
17	100	3.000	0.48
18	110	2.72	0.65
19	123	2.44	0.74
20	138	2.17	1.02
21	157	1.91	1.16
22	175	1.710	1.63
23	200	1.50	1.92
24	220	1.36	2.55

^{1/} For 50 Hz operation, reduce secondary current by 10 percent.

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VERIFICATION:

Extent of qualification:

Qualification testing and approval to M27/312-26, M27/316-30, and M27/322-24 shall be sufficient to grant qualification approval to MIL-PRF-27/312 through MIL-PRF-27/322, inclusive, all parts.

Qualification testing and approval to M27/322-24 shall be sufficient to grant qualification approval M27/322-01 through M27/322-24.

Custodians:

Army - CR
Navy - EC
Air force - 11

Preparing activity:

DLA - CC

Review activities:

Army – AR, CR4
Navy - AS, MC, OS, SH
Air Force - 19, 99

(Project 5950-1084)